BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

DOCKET NO. 2020-63-E

IN RE: Bridgestone Americas Tire Operations, LLC, Petitioner, v. Dominion Energy South Carolina, Inc. Respondent.	)	**DIRECT TESTIMONY OF DERRICK FREEMAN**

Q. PLEASE STATE YOUR NAME, PRESENT POSITION, AND BUSINESS ADDRESS.

A. My name is Derrick Freeman, Plant Engineer at the Bridgestone Americas Tire Operations, LLC in Aiken County PSR Plant, #1 Bridgestone Parkway, Graniteville, SC.

Q. WHAT ARE YOUR DUTIES IN YOUR CURRENT POSITION?

A. I am the leader of the Maintenance, Engineering, and CIM (IT) groups.

Q. WHAT IS YOUR EDUCATION AND PROFESSIONAL BACKGROUND?

A. I have a Bachelor of Science in Electrical Engineering from the University of South Carolina (Columbia, SC - 1992). I started my career in 1992 as a Process Engineer with Westinghouse at the Savannah River Company. In 1997, I was hired by Thermal Ceramics in Augusta Georgia as a Project Engineer. In 2000, I was hired by Bridgestone to be the electrical

engineer for their Stock Cutting and Extrusion Area. Since that time, I have held many positions in both Engineering and Maintenance.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to support Bridgestone Americas Tire Operations, LLC's ("BATO") application for an order compelling Dominion Energy South Carolina, Inc. ("DESC") to allow the operation of a 1.98MW AC solar array as authorized by State Law.

Q. DOES BATO HAVE A CONTRACT FOR ELECTIC SERVICE WITH DESC?

A. Yes. BATO's Aiken County plants are served by DESC and the parties' duties and obligations are governed by a contract for electric service last amended in January of 2012 and approved by the Commission. The contract provides, that BATO's service installations shall be made in accordance with the terms and conditions of the contract. For instance, BATO's service installations must be made in accordance existing provisions of the National Electrical Code, the Regulations of the Nation Board for Fire Underwriters, and the regulation of this Commission. Under the contract for electric service, BATO is responsible for the protection and safekeeping of DESC's equipment and facilities. BATO's contract with SCE&G (now DESC) was approved by the Commission by Order No. 2009-102 on February 26, 2009. A copy of BATO's contract for electric service together with Order No. 2009 -102 is attached to my testimony as Exhibit A. In 2011, BATO determined to expand production at its Passenger and Light Truck Tire plant which was expected to result in an additional 300 full time and contractor jobs by 2015. The expansion of its Passenger and Light Truck Tire plant together with an expansion of its Off-Road Tire Plant in Graniteville, South Carolina was to involve a $1.2 billion investment. The plant expansion,

once completed, would result in an increased load. Consequently, BATO's contract with DESC was amended by the parties January 30, 2012 to extend the 2009 contract by ten years and to provide for an economic development incentive credit. The contract amendment was approved by this Commission by Order No. 2012-392 on May 9, 2012 and is attached to my testimony as Exhibit B.

Q. PLEASE DESCRIBE DESC'S ELECTRIC SUPPLY TO THE BATO PASSENGER AND LIGHT TRUCK TIRE PLANT.

A. DESC provides electric supply from two 13.8 kV transmission lines. Those lines enter Bridgestone's property at 115 kV but are transformed by DESC equipment before being given to Bridgestone. As a part of the agreement established between the two companies when the plant was built, DESC maintains protective equipment that can operate and/or interlock the main switches supplying the entire plant thus de-energizing the plant if a fault should occur on BATO's system.

Q. HOW WOULD YOU DESCRIBE BATO'S ELECTRICITY CONSUMPTION AT ITS PASSENGER AND LIGHT TRUCK TIRE PLANT IN GRANITEVILLE, SOUTH CAROLINA?

A. BATO's tire manufacturing process requires the consumption of considerable amounts of electricity. BATO's Passenger and Light Truck Tire Plant operations consume more electricity than any of its other tire manufacturing facilities in the United States. Currently, BATO's electric load is [averages over [redacted] MWh/mth and over [redacted]/mth]

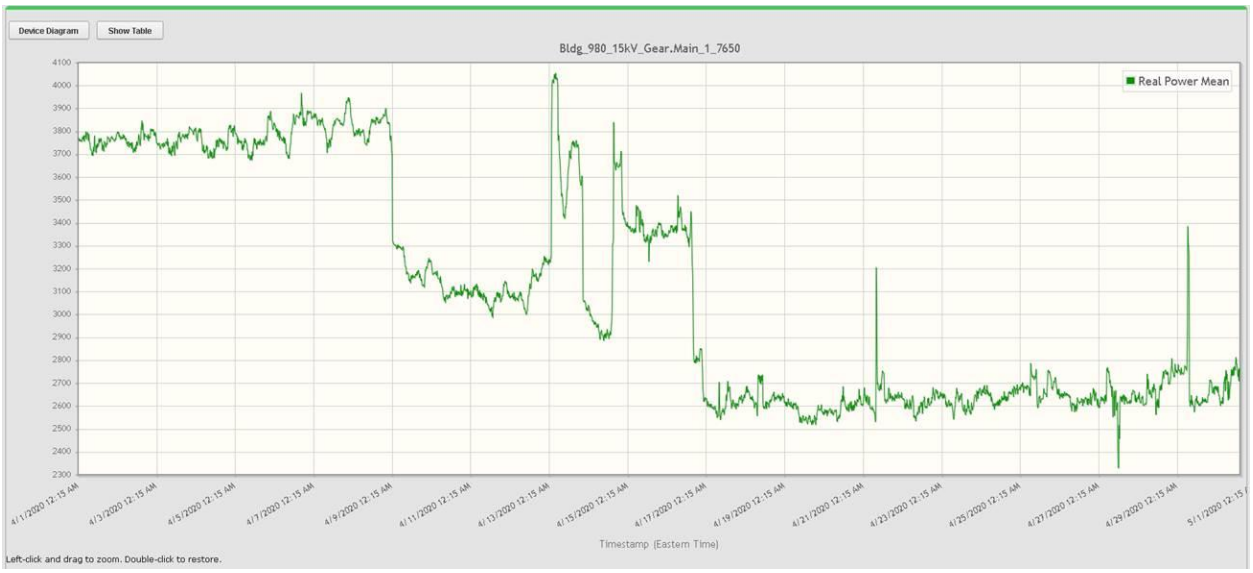
Q. IS BATO'S ENERGY USE CONSTANT THROUGHOUT THE YEAR?

A. No. Typically, BATO's operations at this plant operate 24 hours a day, seven days a week. When operating, the electric load is relatively constant. When manufacturing, the electric load is in the range of 30 - 34MW. However, in July and December of the year, BATO temporarily ceases manufacturing to perform maintenance that cannot be done while the plant is manufacturing tires. When the plant is down for maintenance, the electric load drops.

Q. ARE THERE TIMES WHEN THE BATO PASSENGER AND LIGHT TRUCK TIRE PLANT COMPLETELY SHUTS DOWN AND CONSUMES NO ELECTRICITY?

A. Other than to perform maintenance on a switch, the Passenger and Light Truck Tire Plant always consumes electricity. Even when totally idle with no maintenance activities, the plant consumes considerable electricity. The recent plant shut down resulting from the corona virus pandemic has been helpful for us to better understand the minimum electric load at the Plant. The two graphs below demonstrate the absolute minimum electric load of the plant. The load for Bus 1 had a single dip that was still greater than 2.3 MW and Bus 2 did not get below 4.0 MW the entire month.

Bus 1



Bus 2

This is the first time that the plant has ever seen this type of shutdown and low energy usage in its almost 22 years of operation, yet the Plant continued to consume on the order of 6.3 MW of electricity at its lowest point.

The Graniteville plant's electricity consumption will continue to increase after completion of the current plant expansion.

Q. PLEASE DESCRIBE THE SOLAR ARRAY.

A. The Solar Array is designed to provide BATO with supplemental electricity to operate the Passenger and Light Tire Truck Tire Plant and to meet BATO's renewable energy goals. The Solar Array is directly connected to the Graniteville plant's powerhouse and is not interconnected to DESC's equipment and facilities or its distribution and transmission system. Because the Graniteville plant will consume all the electricity generated by the Solar Array, it will not interfere with DESC's equipment and facilities or its distribution and transmission system. Nevertheless, to further protect and safeguard DESC's equipment and facilities and its distribution and transmission system, DESC required BATO to install reverse power flow protection relays preventing electricity from being inadvertently transmitted from the Solar Array to DESC's equipment and facilities or to its distribution and transmission system. Attached to my testimony as Exhibit C is a solar power project overview demonstrating the general design and layout of the electric power system including the solar array. The Solar Array was also constructed in accordance with the General Terms and Conditions, Specifications for Service and Meter Installations set out in the contract for electric service between BATO and DESC approved by this Commission. The Solar Array was constructed in compliance with all Federal, State, and local codes as well as the regulations of the Commission. The Solar Array provides for the protection and safekeeping of DESC's equipment and facilities. DESC representatives have acknowledged that the Solar Array meets these requirements.

Q. PLEASE DESCRIBE BATO'S NEGOTIATIONS WITH DESC'S PREDECESSOR SCE&G TO CONSTRUCT AND OPERATE THE SOLAR ARRAY.

A. Having met all DESC's requirements for the Solar Array's construction, DESC and BATO both agreed that the Solar Array as designed was not subject to the South Carolina Generator Interconnection Procedures ("SC GIP"). However, DESC subsequently reversed its position and refused to allow the operation of the Solar Array, requiring instead that the Solar Array be treated as if it were subject to the South Carolina Generator Interconnection Procedures or SC GIP. DESC insisted that BATO file an interconnection application and take its place in the interconnection queue. BATO's Solar Array is in 375th place in the queue and DESC representatives have been unable to inform BATO when its Solar Array will be allowed to operate. BATO representatives have made every effort to resolve its dispute with DESC, but DESC has failed to and refuses to recognize that the Solar Array is not governed by the SC GIP.

Q. WHAT IMPACT WILL BATO'S SOLAR ARRAY HAVE ON DESC'S EQUIPMENT AND FACILITIES?

A. As demonstrated above, our history of electric load consumption reflects that BATO's minimum electric load is greater than 2.3 MW for any one feeder, and therefore the 1.98 MW solar array is incapable of meeting BATO's minimum electric load requirements. There is no calculable risk to DESC of a reverse power flow from BATO's Passenger and Light Truck Tire Plant. However, because BATO installed reverse power flow protection relays at DESC's direction to protect DESC's equipment and facilities, BATO has fully complied with its responsibilities under its contract for electric service with DESC.

Q. IS THE SOLAR ARRAY CAPABLE OF NET METERING OR TRANSMITTING SOME PART OR ALL OF ITS OUTPUT TO DESC OR THIRD PARTIES?

A. No. The Solar Array is not interconnected to DESC's transmission system and does not operate in parallel with DESC's system. By design, the Solar Array cannot be operated for the purposes of net metering, the sale of output to DESC or the sale of electricity to third parties. The Solar Array is constructed to generate electricity solely for self-consumption onsite by BATO and does not operate in parallel to DESC's distribution and transmission system. Consequently, BATO's Solar Array is not subject to the South Carolina Generator Interconnection Procedures.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does. I would like to thank the Commission for hearing our case.